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NEW SPECIES OF THE HELICOID GENUS POLYGYRA.

BY HENRY A. PILSBRY.

At the request of Mr. John Ponsonby of London, the determination of a series of Polygyras of unknown or doubtful specific identity, from his collection, was undertaken by the writer. In the course of this work, the Mexican species of the genus were reviewed, the identification of the Academy's material verified, and several specific forms, hitherto nameless or under incorrect names, were studied.

The following communication relates to species of that characteristic "Lower Sonoran" group of Polygyra, of which *P. plagioglossa* and *P. ventrosula* represent approximately the extremes in the cycle of form changes.

The types of *P. latispira*, *matermontana* and *euglypta* are in the collection of the Academy. The types of *P. Ponsonbyi* are in the same collection and that of Mr. Ponsonby; and the type of *P. albicostulata* is in Ponsonby's collection.

These five species, with *P. Mearnsii* and *P. chiricahuana* Dall (Proc. U. S. Nat. Mus., 1895), and *P. solidens* and *P. triangularis* Mabille (Bull. Soc. Philomath. de Paris, 1895) complete the list of Polygyras given in the Guide to the Study of Helices, pp. 73, 74.

P. latispira n. sp. Pl. III, figs. 13, 14, 15, 16.

Shell depressed, with convex spire, rounded but noticeably shouldered periphery and convex base; umbilicated, the umbilicus within deep and cylindrical, about .8 mm. diam., at the last whorl rapidly enlarging, 2.3 mm. diam., or contained about five times in the diameter of the shell, conspicuously grooved inside. Surface very closely and regularly rib-striate, moderately shining. Light yellow or buff in color. Whorls $5\frac{1}{2}$, closely coiled, slowly widening, rather convex, having an oblique impression behind the outer, and an excavation behind the basal lip. Suture well impressed, descending only a trifle at the aperture.

Aperture quite oblique, roundly lunate, the lip forming two-thirds of a circle, rather narrowly reflexed; outer lip bearing an inwardly projecting pointed tooth; basal lip with a slightly keeled face along

its outer half, the inner part bearing a rather long, low, callous tooth with the summit a trifle flanged outwardly. Deep within the aperture a lobe-like tooth may be seen on the columella. Parietal tooth small, V-shaped, the outer ridge of the V extremely short.

Alt. 6, greater diam. $11\frac{2}{3}$, lesser $10\frac{1}{2}$ mm.

The specimens serving as types were collected some years ago (about 1880) by Dr. Horatio C. Wood in western Texas, either in the "Great Bend" of the Rio Grande or near El Paso, exact locality not noted.

The species is somewhat allied to *P. plagioglossa*, having about the same general contour and agreeing in the proportions of the parietal lamella; but the armature of the basal lip is conspicuously different, and there is a deep-seated lamella on the columella, such as well developed examples of *P. Mooreana* show, but apparently united by a low ridge with the inner end of the basal tooth. This lamella corresponds to the groove within the umbilicus, and is not visible in the drawings.

P. matermontana n. sp. Pl. III, figs. 10, 11, 12.

Shell depressed, with low, convex spire, rounded periphery and convex base; umbilicated, the axial perforation small and deep, at the last whorl rapidly enlarging to about one-fifth the diameter of shell. Surface shining, faintly wrinkled by growth-lines and showing under the lens superficial close spirals in some places; light horn colored. Whorls $5\frac{1}{2}$, quite convex, the inner slowly increasing, narrow, the last decidedly wider, notably convex above, with the periphery above the middle; deeply and narrowly constricted behind the lip. Suture well impressed, abruptly deflexed in front.

Aperture quite oblique, rounded oval, the lip forming over two-thirds of the circumference; outer lip broadly expanded, flaring, bearing a concave lamella with a denticle at the lower end on its inner edge; basal lip reflexed, with a compressed, slightly entering tooth. Parietal callus a translucent film, bearing a V-shaped lamella not connected with the peristome, the outer branch of the V very short.

Alt. 5.2, greater diam. 9.5, lesser 8 mm.

Colima, Sierra Madre Mts., Mexico.

Besides the types from above locality, there is one specimen in the collection of the Academy labelled "Mexico" differing in size, alt. 6.1, greater diam. 11 mm., and having 6 whorls. It agrees in all other characters and is doubtless the same specifically. Two other specimens labelled "Texas" are altogether like the types.

P. matermontana is like *texasiana* in the notch between the two lip-teeth, but the outer tooth is a more pronounced and shorter lamella, the parietal "V" is less developed, and the upper surface is not costulate. The parietal lamella is much alike in *maternontana* and *latispira*, the outer branch being much less developed than in *Richardsoni*, *ventrosula* or *bicruris*. The umbilicus is like that of *latispira*, being slightly more ample than in *texasiana*, and with the central well, or perforation decidedly larger.

This species and the three following have nearly the same form of aperture teeth and are very similar to other species grouping immediately around *P. ventrosula* in this respect. The comparative width of umbilicus, the sculpture, and to a less extent, the contour, differ in the several forms. The inverted T shaped tooth upon the outer lip, formed by a lamella parallel to the lip-edge with a shorter one at its lower end, transverse to it, is characteristic of the group.

P. Ponsonbyi n. sp. Pl. II, figs. 1, 2, 3.

Shell globose-depressed, with low conoid-convex spire, rounded periphery and convex base. Umbilicus one-sixth the diameter of shell, with flattened, nearly vertical walls, narrowing to a perforation beyond the last whorl. Surface shining, smooth except for extremely faint growth-wrinkles; corneous-brown, with a chestnut-brown super-peripheral band on the body-whorl, appearing on the spire as a narrow sutural margination. Whorls $5\frac{1}{2}$, convex, slowly widening, the last decidedly wider, tumid on the latter half of the base, deeply and narrowly constricted behind the outer and basal lips. Suture well and evenly impressed, abruptly and deeply deflexed in front.

Aperture very oblique, rounded-oval, the lip forming three-fourths of the circumference. Outer lip broadly flaring, its inner edge bearing a short concave lamella, with a projecting compressed tooth at its lower end; basal lip reflexed, with a similar compressed tooth. Parietal wall bearing a short, erect, straight lamina parallel with the basal lip, and having a very short V-branch at the outer end; the inner termination not extending to the columella insertion.

Alt. 5, greatest diam. 8.2, lesser 7.2 mm.

Types from Mexico, exact locality not known, in the collections of John Ponsonby and the Academy of Natural Sciences of Philad.

Like *ventrosula* and *Richardsoni* in the teeth of the lip, but more globose than either, parietal tooth with only a trace of the outer

branch of the V, base more tumid, and umbilicus of last whorl more well-like.

P. euglypta n. sp. Pl. II, figs. 7, 8, 9.

Shell obese, with low conic spire, rounded-angular periphery near the top of last whorl, sloping outer wall and convex, tumid base. Umbilicated, a central perforation expanding at last whorl to form an umbilicus about one-sixth the diam. of shell, and with the wall rising almost vertically from its suture. Surface of outer $1\frac{1}{2}$ whorls sculptured with sharp, strong and regular thread-like sigmoid riblets, subobsolete and more numerous by intercalation in the immediate vicinity of the umbilicus; the inner whorls of spire smooth. Whorls $4\frac{1}{3}$ - $4\frac{2}{3}$, the inner slowly increasing, last whorl much wider, very deeply constricted and excavated behind the outer and basal lips. Suture impressed, deeply descending in front.

Aperture extremely oblique, transversely oval, the lip forming three-fourths of the circumference, upper and basal margins subparallel. Outer lip broadly flaring, with a short lamella on its inner edge, formed of a compressed, slightly entering portion joined T-like to a short lamella parallel to the inner lip-edge; basal lip reflexed, bearing a compressed, entering tooth similar to the lower portion of the T on outer lip. Parietal tooth like a narrow, slanting V, the two branches united with the ends of the lip.

Alt. 5.3, greater diam. 9.5, lesser 8.2 mill.

Alt. 4.3, greater diam. 7.5, lesser 6.4 mill.

Cinaloa (larger form) and Mazatlan (smaller form).

A member of the *P. ventrosula* group, distinguished from *ventrosula*, *Hindsii*, *Richardsoni* and *bicruris* by the very strong, sharp ribstriation of the last $1\frac{1}{2}$ whorls.

P. albicostulata n. sp. Pl. II, figs. 4, 5, 6.

Shell obese, with convex spire, periphery much above middle of body-whorl, and tumid base. Umbilicated, the umbilicus narrow and deep, with vertical walls, not much enlarging at last whorl, where it measures about one-ninth the diameter of the shell; within the umbilicus the last whorl has a deep spiral furrow, obliquely passing into the groove behind the basal lip. Surface shining, the latter two whorls sculptured with coarse whitish riblets with corneous brown spaces; inner whorls nearly smooth, corneous brown. Whorls $5\frac{1}{4}$, weakly convex, the last very obtusely angular at its origin, becoming rounded and tumid on the latter half, deeply and narrowly

constricted behind the outer and basal lips. Suture slightly impressed, rather abruptly and deeply deflexed in front.

Aperture oblique, oblong, the upper and basal margins subparallel; outer lip reflexed, its inner edge bearing a concave lamina ending below in a denticle; basal lip reflexed, impinging on the umbilicus, with a compressed tooth separated from the lamella on outer lip by a deep squarish sinus, a gentle swelling to the left of it. Parietal wall glazed with a translucent film, and bearing a long V-shaped tooth, the outer branch of which is short and not connected with the upper insertion of outer lip.

Alt. 5.5, greatest diam. 8.5, lesser 7.5 mm.

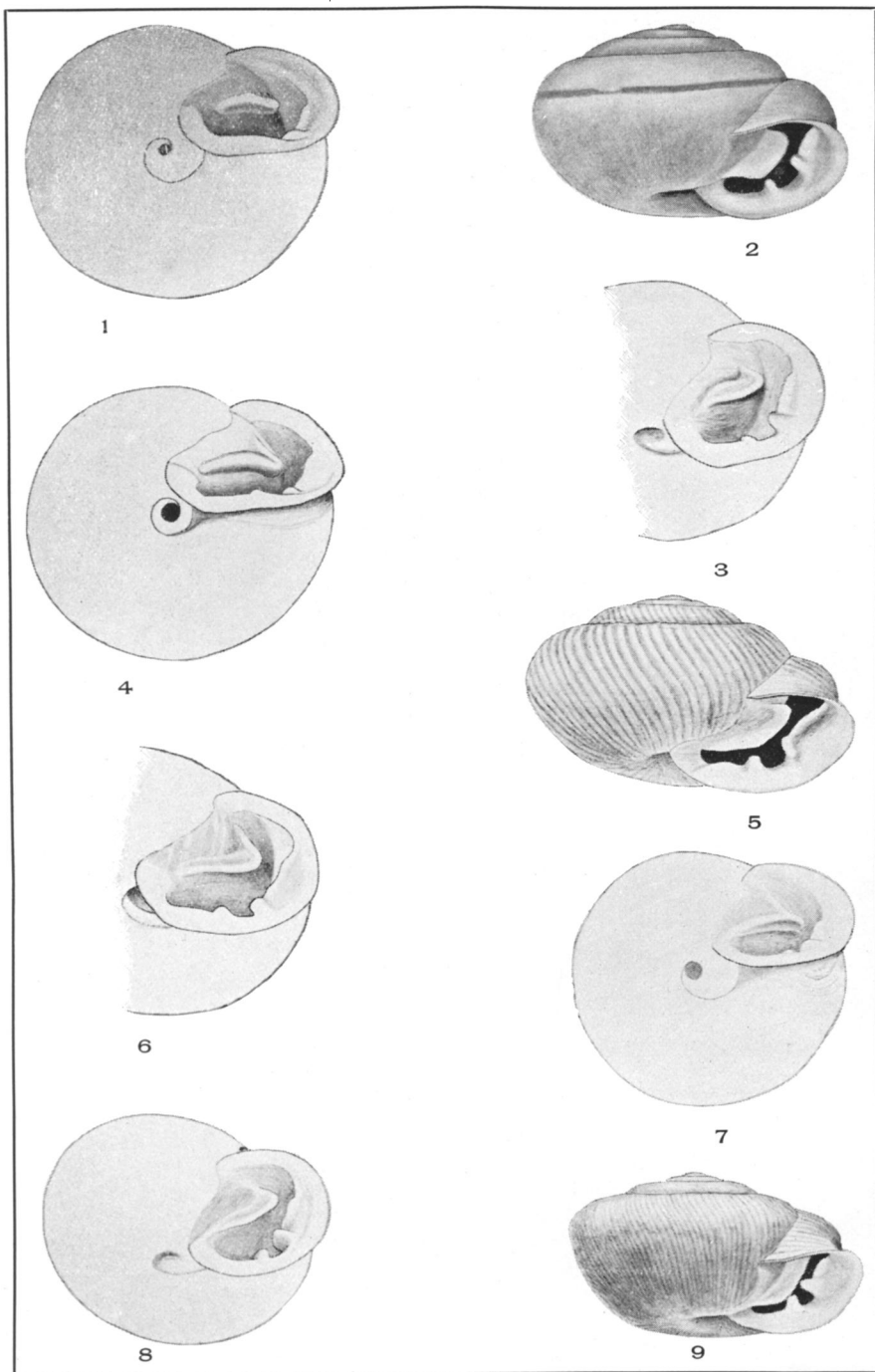
Type in collection of Mr. John Ponsonby of London. It is said to be from Mexico, and has the appearance of a northern Mexican shell.

The strong, whitish rib-striae, narrow and nearly regular umbilicus with spiral groove within on the last whorl, and the aperture much as in *euglypta*, *Richardsoni* and *ventrosula*, are a combination of characters amply sufficient to distinguish this species from other forms now known; and while I am opposed on principle to the description of species without exact locality record, it seems best in some cases to depart from this salutary rule. I do not think any one will have difficulty in recognizing the species, as no other *Polygyra* having the apertural characters of this one, presents a similar umbilicus or sculpture.

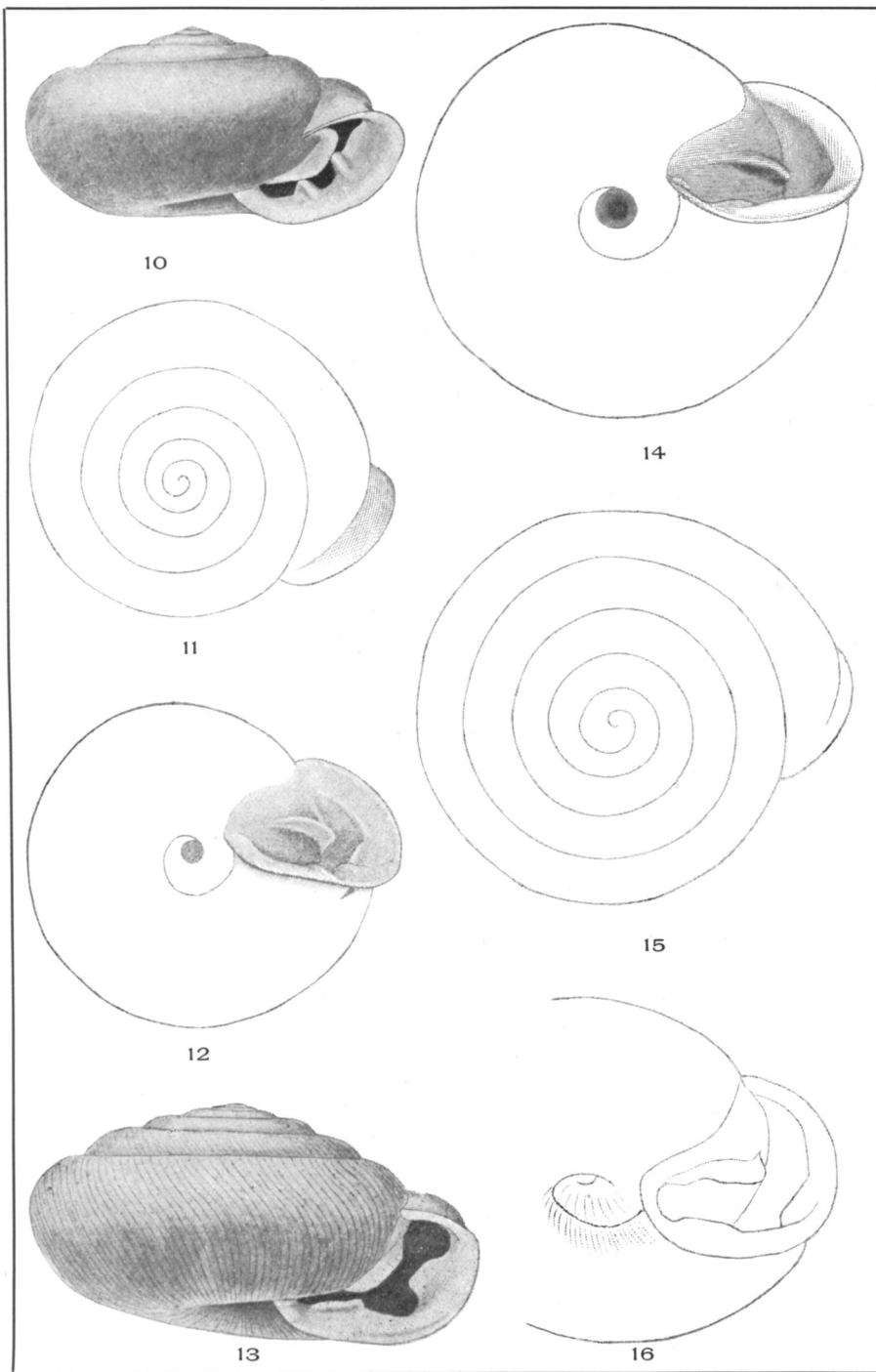
EXPLANATION OF PLATES II and III.

- Fig. 1. *Polygyra Ponsonbyi* n. sp., seen from below.
- Fig. 2. *Polygyra Ponsonbyi* n. sp., anterior view.
- Fig. 3. *Polygyra Ponsonbyi* n. sp., aperture, the plane of peristome at a right angle to line of vision.
- Fig. 4. *Polygyra albicostulata* n. sp., from below.
- Fig. 5. *Polygyra albicostulata* n. sp., anterior view.
- Fig. 6. *Polygyra albicostulata* n. sp., aperture, the plane of peristome at a right angle to line of vision.
- Fig. 7. *Polygyra euglypta* n. sp., aperture, the plane of peristome at right angle to line of vision.
- Fig. 8. *Polygyra euglypta* n. sp., seen from below.
- Fig. 9. *Polygyra euglypta* n. sp., anterior view.
- Fig. 10. *Polygyra matermontana* n. sp., anterior view.
- Fig. 11. *Polygyra matermontana* n. sp., seen from above.

- Fig. 12. *Polygyra matermontana* n. sp., seen from below.
- Fig. 13. *Polygyra latispira* n. sp., anterior view.
- Fig. 14. *Polygyra latispira* n. sp., seen from below.
- Fig. 15. *Polygyra latispira* n. sp., seen from above.
- Fig. 16. *Polygyra latispira* n. sp., aperture, the plane of peristome
at a right angle to line of vision.



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